

NOTES ON SOME MISCELLANEOUS COLEOPTERA, WITH
DESCRIPTIONS OF NEW SPECIES.—PART IV.

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[*Contribution from the South Australian Museum.*]

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PLATES XXX. TO XXXII.

PSELAPHIDAE.

ARTICERUS.

The genus *Articerus* (like *Mandalotus* of the Curculionidae and *Laius* of the Malacodermidae) contains species many of which are characterized by remarkable sexual features. In the male the metasternum is always different from that of the female, being often armed with one or two spines or projections and sometimes largely excavated; the under-surface of the abdomen of the female is usually evenly convex, with the pygidium in the normal position of that organ; but on the male the abdomen is strongly depressed towards the base, with the apex incurved and the pygidium overhanging; as a result the sex of a specimen carded in the ordinary way may be distinguished from the side, the female having the metasternum and abdomen almost continuously resting on the card, while in the male there appears a gap (sometimes of great extent) between the tip of the abdomen and the highest point of the metasternum; the tibiae of the male are often armed and sometimes have curious flanges, the femora and trochanters are also subject to great sexual variation; but the sexual variation of the antennae is seldom very pronounced. It is desirable to set unique specimens so that both surfaces may be closely examined, and in describing new species quite as much attention requires to be paid to the under-surface and appendages as to the upper-surface. At one time several exotic species were referred to the genus, but these have all been excluded by Raffray.

The following references, mostly since the date of Masters' Catalogue, have been made:—

SCHAUFUSS: Ann. Mus. Civ. Gen., 1882, pp. 176-196.

Monographs the genus (then containing several foreign species), one being described as new; this paper, except for *aurifluis* (given as for 1883), was not referred to in Masters' Catalogue.

RAFFRAY: Rev. d'Ent., Caen., 1887, p. 18.

One species described as new.

RAFFRAY: Proc. Linn. Soc. N.S. Wales, 1900, pp. 241-244.

Four species described as new.

RAFFRAY: Ann. Mus. Nat. Hung., 1903, p. 97.

One species described as new.

RAFFRAY: Ann. Soc. Ent. Fr., 1904, pp. 445, 454.

Notes on genus.

RAFFRAY: *l.c.*, 1909, p. 50.

One species described as new.

RAFFRAY: Wytsman's Gen. Insect., 1908, fasc. 64, pp. 417, 425, 426.

Notes on genus and catalogue of species.

RAFFRAY: Junk's Catal. Col., 1911, part 27, pp. 172, 173.

Catalogue of species.

BLACKBURN: Trans. Roy. Soc. S. Austr., 1889, p. 138.

One species described as new.

LEA: Proc. Roy. Soc. Vict., 1904, pp. 375, 376.

Notes on four species given.

LEA: *l.c.*, 1910, pp. 163-174.

Notes on most of the known species given and nine described as new.

LEA: *l.c.*, 1912, pp. 53-56.

Notes on several species given and one described as new.

The males of the species known to me may be tabulated as follows:—

A. Antennae circular in transverse section throughout.	...	...	...	...	<i>nitidicollis</i>
a. Abdomen suddenly constricted near base	...	...	...	...	
aa. Not so constricted.	...	...	...	...	
b. Excavation on upper-surface of abdomen not encroaching on middle of convex portion.	...	...	...	...	
c. Middle legs with femora strongly arched and trochanters very conspicuous	...	...	...	...	<i>regius</i>
cc. Middle femora not arched and trochanters not conspicuous.	...	...	...	...	
d. Metasternum strongly armed posteriorly	...	...	...	...	<i>cremastogastri</i>
dd. Metasternum unarmed	...	...	...	...	<i>fortnumi</i>
bb. Excavation encroaching on middle of convex portion.	...	...	...	...	
e. Antennae (except for the basal constriction) of even width throughout	...	...	...	...	<i>cylindricornis</i>
ee. Antennae more or less conspicuously dilated to apex.	...	...	...	...	
f. Front tibiae with a very conspicuous flange on outer side	...	...	...	...	<i>cultripes</i>
ff. Middle tibiae with a very conspicuous flange or tooth on outer side	...	...	...	...	<i>hamatipes</i>
fff. Front or middle tibiae not flanged, or, if flanged, not on the outer side.	...	...	...	...	
g. Metasternum bidentate posteriorly.	...	...	...	...	<i>bispinosus</i>
h. The teeth very conspicuous and with a common base	...	...	...	...	
hh. The teeth much smaller and separated at base.	...	...	...	...	
i. Antennae evenly dilated to apex	...	...	...	...	<i>femorialis</i>
ii. Antennae suddenly dilated near apex	...	...	...	...	<i>bipartitus</i>
gg. Metasternum unidentate posteriorly.	...	...	...	...	
j. Apex of abdomen bidentate.	...	...	...	...	
k. Antennae conspicuously curved and almost uniformly dark	...	...	...	...	<i>lophosternus</i>
kk. Antennae scarcely curved, shorter, and apex distinctly paler than base	...	...	...	...	<i>dentiventris</i>
jj. Apex of abdomen unarmed.	...	...	...	...	
l. Metasternum conspicuously clothed along middle	...	...	...	...	<i>intercoralis</i>
ll. Metasternum almost glabrous	...	...	...	...	<i>gibbulus</i>

AA. Antennae wider than deep, at any rate in parts.	...	...	...	...	...	<i>tumidus</i>
B. Middle femora enormously inflated	...	...	...	...	...	
BB. Middle femora not so inflated.	...	...	...	...	...	<i>curvicornis</i>
C. Excavation on upper-surface of abdomen encroaching on middle of convex portion.	...	...	...	...	...	<i>dilataticornis</i>
m. A conspicuous seta projecting from the mouth	...	...	...	...	...	
mm. Without such a seta.	...	...	...	...	...	
n. Superficial area of each antenna about equal to that of head	...	...	...	...	...	
nn. Much less.	...	...	...	...	...	<i>brevipes</i>
o. The posterior encroachment of the excavation shallow and inconspicuous except from a few directions	...	...	...	...	...	<i>pascoeus</i>
oo. The encroachment very conspicuous.	...	...	...	...	...	<i>mastersi</i>
p. Front tibiae conspicuously armed at apex	...	...	...	...	...	<i>constricticornis</i>
pp. Front tibiae not so armed	...	...	...	...	...	
CC. Excavation not encroaching as on C.	...	...	...	...	...	
D. Antennae constricted in middle.	...	...	...	...	...	
DD. Antennae not so constricted.	...	...	...	...	...	
E. Metasternum with a large deep excavation, behind which are two large suberect teeth.	...	...	...	...	...	
q. Each wall of the excavation dentate in middle	...	...	...	...	...	<i>griffithi</i>
qq. Walls not dentate	...	...	...	...	...	<i>excavipectus</i>
EE. Metasternum at most lightly excavated posteriorly.	...	...	...	...	...	<i>irregularis</i>
F. Metasternum unarmed	...	...	...	...	...	<i>curifusus</i>
FF. Metasternum with two spines transversely placed	...	...	...	...	...	
FFF. Metasternum armed, but not transversely.	...	...	...	...	...	<i>dentipes</i>
G. Middle trochanters very conspicuously armed	...	...	...	...	...	
GG. Not so armed.	...	...	...	...	...	<i>sulciventris</i>
H. Under-surface of abdomen longitudinally sulcate	...	...	...	...	...	
HH. Under-surface excavated or foveate.	...	...	...	...	...	<i>raffrayi</i>
I. Sides of the excavation of under-surface with two small teeth	...	...	...	...	...	<i>coelogaster</i>
II. Without such	...	...	...	...	...	

NOTES ON TABLE.

A. On some of the species of this section the antennae are more or less strongly curved, but they are nowhere flattened, so that a section cut anywhere through them, at right angles to their length, would be a perfect circle; on some of the species of AA (*e.g.*, *curvicornis*) part of the antennae, more especially about the apex, is more or less circular in cross-section, but there is at least a portion between the middle and the base, where they are flattened, so as to be more or less narrowly elliptic in cross-section.

e. Seen both from below and from the sides; in *intercoxalis* the increase in width to the apex is rather slight, but quite distinct.

f. See Proc. Linn. Soc. N.S. Wales, 1900, pl. x., fig. 23.

ff. *L.c.*, fig. 40.

C. On the abdomen of *curvicornis* the excavation slopes backwards on to the convex portion of the abdomen, although there is not a special median encroachment of it; but although thus somewhat intermediate between C and CC, the species has many distinctive features; in *brevipes* the encroachment is more conspicuous than on *curvicornis*, but less than on the others; on some of the species of CC, the excavation encroaches upon the sides of the convex portion.

oo. pascoeus and *mastersi* are also very distinct by their sternal armature.

D. As viewed from the sides, see Proc. Linn. Soc. N.S. Wales, 1910, pl. xxvii., fig. 39.

Comments follow on the species not included in the table.

A. *ANGUSTICOLLIS*, Westw. The type was probably a female; judging by the description and figure it could be placed in the table as far as DD, but not beyond, as the metasternum was not mentioned.

A. *ASPER*, Blackb. Should be distinct by the absence of a prothoracic fovea, but the legs (except as to their colour), under-surface of abdomen, and metasternum were not mentioned, so it cannot be placed in the table beyond AA.

A. *BOSTOCKI*, Pasc. Schaufuss regarded this name as a probable synonym of *fortnumi*, a surmise not accepted by Raffray. By the description alone it cannot be placed in either A or AA.

A. *BREVICEPS*, King. Probably belongs to A of the table, but the metasternum, abdomen, and legs were not mentioned; a cotype that I examined some years ago was a female without antennae.

A. *CONSTRICIVENTRIS*, Lea. A remarkable species, allied to but abundantly distinct from *nitidicollis*, with which

it would be associated in the table, but the female only being known it has not been included.

A. CYLINDRICORNIS, Lea (=CYLINDRICORNIS, Raffr.).

A. DEYROLLEI, Sharp. Belongs to AA of the table, but the particulars given by Sharp are not sufficient to carry it beyond BB; it should, however, be very distinct by the absence of abdominal fascicles.

A. DUBOULAYI, Waterh. Evidently belongs to AA, but the metasternum not being mentioned, cannot be carried beyond DD; I have seen nothing approaching the original figure.

A. FALCATUS, Raffr. Allied to *curvicornis*, the description being little more than a comparison with that species; in the table it cannot be carried beyond BB.

A. FOVEICOLLIS, Raffr. The metasternum and under-surface of the abdomen were not described, but the figure given by Raffray is strikingly different from that of any other species known to me; in the table it cannot be carried beyond *ee*.

A. KINGIUS, Sharp. This name is probably synonymous with *cultripes*, over which it has precedence.

A. ODEWAHNI, Pasc. (=FORTNUMI, Hope).

A. SELYSI, Schauf. Evidently belongs to AA, but no particulars of the under-surface and legs were given, and the type was a female.

A. SETIPES, Westw. The type appears to be a male; in some respects it appears to approach *dentipes*, but differs somewhat in the antennae and legs; as the metasternum was not mentioned it cannot be placed in the table beyond DD.

A. SHARPI, Masters (=TUMIDUS, Westw.).

A. SPINIFER, Sharp. Evidently belongs to A of the table, and the male should be very distinct by its antennae, legs, and under-surface.

A. TUMIDUS, Sharp (=TUMIDUS, Westw.).

A. WESTWOODI, Sharp. Very close to if not synonymous with *curvicornis*; the latter was originally described from Victoria, but occurs also in New South Wales, Tasmania, and South Australia.

ARTICERUS DEYROLLEI, Sharp.

A female from North-western Australia (Fortescue River, taken by Mr. W. D. Dodd from a nest of *Iridomyrmex*) possibly belongs to *deyrollei* (described as from "Australia"). In general appearance it is like an elongated specimen of *curvicornis*, and the clothing of the upper-surface is somewhat similar, but the head is longer, antennae more

parallel-sided, and impression of pronotum much less conspicuous. Its antennae, as seen from above, are (except about the base) parallel-sided, but from the side each appears thin from the base to near the apex, when it is strongly triangularly inflated and truncated; its abdomen is without distinct fascicles (it is the only species I have seen of which this could be said), but the margin of each near the base is rather more densely clothed than the rest of the upper-surface.

ARTICERUS GIBBULUS, Sharp.

With doubts I previously⁽¹⁾ identified some Victorian specimens as *gibbulus*; but since then have seen four specimens in the South Australian Museum (including three males) labelled as *bostocki*, and as from Western Australia, that evidently belong to *gibbulus*, and are certainly distinct from the Victorian specimens (described on page 251 under the name of *cremastogastri*). The original description of *bostocki* is worthless, but the name (probably incorrectly) has been regarded as a synonym of *fortnumi*; *fortnumi* is an abundant species in South Australia, but I have seen no specimens of it from Western Australia.

ARTICERUS DENTIVENTRIS, n. sp.

♂. Dark castaneous-red; head, prothorax, and base of antennae still darker. Moderately clothed with reddish (in some lights almost golden) pubescence, becoming setae on tips of elytra; upper-surface of abdomen almost glabrous, but sides near apex with a few stiff setae, each side of base with two fascicle-like patches of clothing; metasternum conspicuously clothed along middle.

Head short, wide, and deep, a longitudinal impression on basal half; punctures dense and comparatively large. Antennae moderately long, cylindrical in section throughout, basal two-thirds rather thin, then suddenly and strongly dilated to the truncated apex. *Prothorax* moderately transverse, front angles rounded off, the hind ones almost rectangular; with a rather large and deep, subelliptic, medio-basal fovea; punctures much as on head. *Elytra* rather strongly dilated to apex, subsutural striae distinct; base with punctures as on prothorax, sparser (but quite distinct) elsewhere. Upper-surface of *abdomen* with a wide deep excavation, with two oblique flat elevations inwards of the fascicles, the posterior end encroaching on the middle of the convex portion behind the fascicles; under-surface at base

(1) Proc. Roy. Soc. Vict., 1904, p. 376.

conspicuously obliquely strigose, apex with a small fovea, overhanging which is the pygidium armed with two short acute teeth. *Metasternum* convex along middle, with a conspicuous process overhanging base of abdomen. Front and hind *tibiae* dilated about apex, the middle ones each terminated by a strong hook; middle tarsi unusually short. Length, 2 mm.

♀. Differs in having the abdomen more dilated posteriorly, its under-surface scarcely depressed below level of metasternum, almost evenly convex, not foveate at apex, not encroached upon by pygidium (which is unarmed), metasternum not ridged along middle, unarmed at apex and more sparsely clothed, and middle *tibiae* similar to the others at apex.

Hab.—Queensland: Stewart River, from nests of a species of *Iridomyrmex*, in appearance somewhat like *detectus* (W. D. Dodd). Type, I, 8536.

Readily distinguished from all previously described species by the remarkable metasternum and abdomen of the male; the colour is also considerably darker (at first glance the head and prothorax appear to be almost black). The setae on each side of the abdomen vary from two to four in number, and are almost spine-like, the dense patch of clothing on each side of the base is divided into two by the elevated margin; there is a stiff seta projecting from the mouth of the male, and a smaller, but still fairly distinct one, from that of the female. From some directions the end of the metasternum appears to have a conical tubercle, but this is really the upper part of an oblique (scarcely vertical) carina, whose lower end (as viewed from the side) appears to be separated from the abdomen by a notch.

ARTICERUS LOPHOSTERNUS, n. sp.

♂. Dark castaneous-red; head, prothorax, and antennae still darker. Moderately clothed with rusty pubescence, becoming longer and more golden on elytra, upper-surface of abdomen glabrous except for a conspicuous oblique golden fascicle on each side of base, and for a few stiff setae at the sides and apex, a distinct line of clothing along middle of sterna, hind femora also conspicuously clothed.

Head short, wide, and deep, with a short longitudinal impression in middle; punctures dense and rather coarse. Antennae moderately long, strongly curved, cylindrical in section, rather thin about base, beyond the middle rather strongly inflated to the truncated apex. *Prothorax* about as wide as long, front angles rounded off, the others almost rectangular; with a deep and rather narrow impression on basal half; punctures much as on head. *Elytra* rather

strongly dilated to apex, subsutural striae distinct; punctures at base as on prothorax, sparser but quite distinct elsewhere. Upper-surface of *abdomen* with a large basal excavation, towards each side of which are two oblique lightly elevated ridges, excavation shallowly encroaching upon convex portion; under-surface obliquely strigose about base, about apex with a small fovea, overhanging which is the pygidium armed with two short stout teeth. *Metasternum* with a narrow ridge from base to just beyond the middle, where it terminates in a small conical tubercle. Front *tibiae* lightly curved on upper-surface, lightly bisinuate on lower-surface, and terminating in a hook; middle pair with a shallow subapical notch, the apex hooked; hind pair rather thin at base, moderately dilated to middle, and then almost parallel to apex. Length, $2\frac{1}{4}$ mm.

Hab.—Queensland: Stewart River, taken in a nest of the same host-ant as that of the preceding species (W. D. Dodd). Type (unique), I. 8537.

With many of the remarkable features of the male of the preceding species, but antennae considerably longer, entirely dark, and more strongly curved, apex (although quite as wide) not so suddenly inflated, ridge of metasternum commencing nearer the base, more acutely pointed and not overhanging the abdomen, apical spines of abdomen stouter, hind femora stouter, and with a very conspicuous oblique ridge of golden setae, front tibiae less dilated near apex and with a slight notch, hind pair different, and abdominal fascicles different. The under-surface of the apical half of the antennae has a granulated appearance, and from some directions each appears to be finely but deeply constricted at the basal third.

ARTICERUS BISPINOSUS, n. sp.

♂. Bright reddish-castaneous. Moderately clothed with depressed, golden pubescence, becoming longer and more irregular on upper-surface of abdomen, near base on each side of abdomen with a semi-double fascicle; under-surface rather sparsely clothed.

Head rather short, with a fine median impression, and with fairly conspicuous punctures. Antennae moderately long, cylindrical in section, thin at the base, thence almost evenly dilated to near apex, but more rapidly (although not strongly) about apex; with numerous small granules. *Prothorax* lightly transverse, front angles rounded off; with a round and conspicuous but not very deep medio-basal fovea; punctures as on head. *Elytra* rather strongly dilated to apex, subsutural striae distinct; punctures not very dense or large but distinct, becoming denser about base. Upper-surface of

abdomen with a wide and deep excavation, its middle distinctly encroaching upon the convex median portion; lower-surface with fine oblique striation about base, about middle with two fine oblique lines. *Metasternum* strongly elevated in middle, at summit of elevation with two strong, acute, oblique, slightly diverging spines. *Legs* comparatively long and thin; front tibiae with a small spine (invisible from most directions) near apex; middle tibiae with a short terminal spur. Length, $1\frac{1}{2}$ - $1\frac{3}{4}$ mm.

♀. Differs in being wider posteriorly, abdomen evenly convex on under-surface, metasternum gently convex along middle and unarmed, and the tibiae unarmed.

Hab.—Lord Howe Island: Mounts Gower and Ledgebird. Type, I. 8535.

The armature of the metasternum of the male is exceptionally strong and double, this character alone rendering the species abundantly distinct from all others; of the described species it is nearer to *bipartitus* than to any other known to me, but it is larger, abdomen, metasternum, and legs different; the antennae are intermediate in shape between those of *bipartitus* and *cylicornis*. The antennae from some directions appear to be gently curved throughout, the granules are more conspicuous about their middle than elsewhere. The excavation on the upper-surface of the abdomen, when viewed from behind, appears to have a wide flat oblique process (triangularly notched at its tip) semi-detached from the middle of each elytron, the space between the processes deeper than elsewhere; from other directions there appear to be four semi-detached processes; the oblique lines on the under-surface of the abdomen appear to mark the sides of a shallow depression, they are present on both sexes, but more conspicuous on the male. The male has a short stout projection from the mouth; on the female it is present, but shorter and less conspicuous.

I had examined numerous nests of ants on the island without finding an inquiline of any sort, and had given up examining their nests when Mrs. Lea, on the slopes of Mount Ledgebird, found some specimens of this species in a nest of a small, blackish, hairy *Iridomyrmex*, under a stone; subsequently I also took a few specimens in a nest of the same species of ant under dry bark of a fallen tree, high up on Mount Gower.

ARTICERUS INTERCOXALIS, n. sp.

♂. Reddish-castaneous; upper-surface, except of abdomen, not very shining. Clothed with rather sparse, pale, depressed pubescence, more golden and conspicuous on apical

slope of elytra than elsewhere, upper-surface of abdomen more sparsely pubescent, but in addition with numerous erect or suberect setae, each side of base with a conspicuous golden fascicle, middle of metasternum moderately clothed.

Head moderately long, with a vague median line; with crowded punctures. *Antennae* moderately long, cylindrical in section, thin about base, then somewhat dilated and parallel-sided to near apex, where it is moderately dilated. *Prothorax* lightly transverse, front angles rounded off, with a rather large, but not very deep, medio-basal fovea; punctures much as on head. *Elytra* moderately dilated to apex, subsutural striae distinct; punctures rather dense and small but distinct, becoming crowded at base. Upper-surface of *abdomen* with a large excavation, semicircularly encroaching upon convex median portion; under-surface constricted in middle. *Metasternum* rather strongly elevated (but not acutely ridged) in middle, posterior slope with a small spine projecting obliquely backwards, a larger and stouter one between middle coxae. Front and hind *tibiae* somewhat dilated at apex, middle ones with a strong, recurved, apical hook. Length, 2 mm.

♀. Differs in being more dilated posteriorly, the metasternum only gently convex along middle and unarmed, abdomen more strongly convex on under-surface, and scarcely depressed below level of metasternum, and the middle tibiae unarmed at apex.

Hab.—South Australia: Lucindale (B. A. Feuerheerdt), Adelaide (A. M. Lea); New South Wales: Kuringai (W. du Boulay). Type, I. 8541.

In general appearance like *cylindricornis* on a small scale, but metasternum of male more convex, with a strong and acute projection between the middle coxae, front tibiae thinner and not notched, the middle ones thinner, and the apical hook at a different angle, the abdominal excavation is smaller and narrower, and the elytra are without apical fascicles. The female may be distinguished from the female of that species by its smaller size, somewhat different abdominal excavation, different prothoracic fovea, and by the absence of a golden line of clothing from the metasternum. From *regius*, which has somewhat similar antennae, it is still more distinct. In some respects it is close to *gibbulus*, but it is darker and more densely clothed, elytral punctures distinct, metasternum of male more conspicuously clothed along middle, and the intercoxal projection more conspicuous. The elytra and abdomen are somewhat paler than the rest of the upper-surface. There is a projection from the mouth, but it is too short and stout to be regarded as a bristle.

The antennae, from some directions, appear to be lightly curved near the apex. All the specimens were taken from nests of a small blackish *Iridomyrmex*, with a metallic-greenish gloss.

ARTICERUS CREMASTOGASTRI, n. sp.

♂. Bright reddish-castaneous. Moderately clothed with pale depressed pubescence, upper-surface of abdomen rather sparsely pubescent, but in addition with numerous suberect setae, each side near base with a distinct fascicle; under-surface more uniformly clothed.

Head rather short, median line lightly impressed; with crowded punctures, but becoming smaller and sparser in front. Antennae moderately long, circular in cross-section, rather strongly and suddenly curved about middle; thin at base, almost evenly dilated to apex. *Prothorax* feebly transverse, front angles rounded off; with a rather large and deep medio-basal fovea, continued as a rather shallow median line almost to apex; punctures dense and comparatively coarse, becoming smaller and sparser in front. *Elytra* moderately dilated to apex, subsutural striae rather feeble; punctures small and not very dense, becoming denser at base. Upper-surface of *abdomen* with a large basal excavation, its middle not semicircularly encroaching upon the convex median portion, but with an oblique impression on each side; under-surface finely strigose at base, constricted in middle. *Metasternum* rather lightly ridged along middle, the ridge terminating in a small but acute process near abdomen. Hind *tibiae* somewhat dilated at apex, the front ones more conspicuously so, the middle ones terminating in an acute hook. Length, 2 mm.

♀. Differs in being slightly more dilated posteriorly, antennae somewhat shorter and stouter, less suddenly (but almost as strongly) curved, metasternum less convex, unarmed, and scarcely elevated (except at the junction) above abdomen (this more strongly and evenly convex), and all tibiae simple at apex.

Hab.—Victoria: Birchip, in nests of *Cremastogaster laeviceps* (J. C. Goudie). Type, I. 8543.

Specimens of this species were previously⁽²⁾ identified by me with doubts as *gibbulus*, but it differs from some specimens of that species now available from Western Australia (the original locality) in being more densely clothed, the head somewhat shorter, the antennae strongly curved, elytra with more conspicuous punctures, the metasternum differently

(2) Proc. Roy. Soc. Vict., 1904, p. 376.

armed, and no spine between middle coxae; on the western specimens the metasternum is more strongly ridged along the middle, but the ridge is more rounded, commences at the base with a spine between the middle legs, and its greatest elevation is hardly spinose and more distant from the abdomen. From *curvicornis* it differs in being larger, antennae of both sexes circular in cross-section throughout (on *curvicornis* in places the antennae are distinctly wider than deep), metasternum and legs very different, oral bristle less conspicuous, etc. Some parts are slightly paler than others, but there are no sharply defined differences. The abdominal fascicles are distinct, but smaller and less conspicuously golden than usual; the under-surface of the abdomen of the male (viewed from the sides) appears to have a few short erect spines, but these are really due to a slight congestion of short setae; the projection from the mouth is very short. The median line of the head is conspicuous from some directions. The front tibiae of the male, from a few directions, appear to have a pale membranous fringe at the inner apex, conspicuously increasing the apparent width. Both sexes have distinctly granulate antennae.

ARTICERUS SULCIVENTRIS, n. sp.

♂. Reddish-castaneous; some parts slightly darker than others. Clothed with very short pubescence, more conspicuous at apex of elytra than elsewhere, upper-surface of abdomen almost glabrous, except for a few short setae, and for a rather elongate fascicle of short clothing on each side of the base; under-surface rather indistinctly clothed, except for a distinct line along middle of metasternum.

Head unusually short and without a median line; punctures dense and rather coarse. Antennae short, scarcely longer than greatest width of head, moderately wide, lightly curved, basal half somewhat flattened, about apex briefly elliptic in cross-section. *Prothorax* distinctly transverse, widest near apex, front angles not completely rounded off; with a large, round, deep, medio-basal fovea; punctures (except in middle of apex, where they are smaller) much as on head. *Elytra* moderately dilated posteriorly, subsutural striae lightly defined; with rather dense and small, but distinct punctures, becoming crowded at base. Upper-surface of *abdomen* with a wide, deep excavation, not encroaching upon middle of convex median portion; under-surface with a rather narrow groove from base to beyond the middle. *Metasternum* sloping from base to beyond middle, where the slope terminates in a short acute spine, beyond this somewhat widely flattened or gently concave. Front and hind

tibiae somewhat dilated at apex, the former with a small apical spine, middle pair with an acute apical hook. Length, $1\frac{3}{4}$ mm.

♀. Differs in being somewhat wider posteriorly, antennae shorter, and (as viewed from the sides) somewhat stouter, under-surface of abdomen evenly convex, not grooved, and metasternum and tibiae unarmed.

Hab.—North-western Australia: Fortescue River, from nests of a small species of *Iridomyrmex* (W. D. Dodd). Type, I. 8539.

Not very close to any other species known to me; *brevipes* (also from North-western Australia) is a shorter species, with less conspicuous prothoracic fovea; and with abdomen, legs, clothing, etc., different. The clothing of most of the upper-surface is so short that it appears almost like very small scales, but the elytra have a conspicuous apical fringe of short spines; the male has a short spine projecting from the mouth. The antennae of the male are lightly curved, viewed from above they appear to be almost parallel-sided from near the base to the truncated apex, but from the sides each appears to be rather thin on the basal half, and then evenly and rather strongly dilated; from some directions they seem to be finely longitudinally striated, but this is really due to the arrangement of the granules. From an oblique direction the widest part of the prothorax appears to be quite angular. From the sides, and in a rather poor light, the under-surface of the abdomen of the male appears to have an acute spine, but in a good light and from an oblique direction this is seen to be due to two erect setae, close together, but one on each side of the median groove.

ARTICERUS COELOGASTER, n. sp.

♂. Dark castaneous-brown; elytra, upper-surface of abdomen, and appendages somewhat paler. Clothed with very short pubescence, becoming more conspicuous and golden about apex of elytra, upper-surface of abdomen with a few erect setae about sides and apex, and with a small fascicle on each side of base.

Head short, wide, and deep, without median line; punctures dense and rather coarse. Antennae short and wide. *Prothorax* lightly transverse, front angles rounded off; with a feeble medio-basal depression; punctures as on head. *Elytra* moderately dilated posteriorly, subsutural striae lightly defined; base with dense and moderately coarse punctures, smaller and sparser (but distinct) elsewhere. Upper-surface of *abdomen* with a short deep excavation, not encroaching upon the convex portion; under-surface with a

large almost circular fovea, extending from base to the slightly overhanging pygidium; with two short medio-apical processes. *Metasternum* sloping upwards from base to beyond the middle, and then strongly sloping downwards to apex. Front and hind *tibiae* somewhat dilated, the middle pair short, strongly curved, and terminated by a sharp spur. Length, $2\frac{1}{4}$ mm.

Hab.—Queensland: Cairns district, from a nest of ants (F. P. Dodd). Type (unique), I. 8538.

The type was somewhat mouldy, and on cleaning it possibly some of the pubescence was removed; the species, however, is one of the most distinct in the genus; it is a rather large dark one, at first glance somewhat resembling, but really very different from, *dentiventris* and *lophosternus*; it is about the size of *dilaticornis*, but the abdomen is very different, antennae smaller, etc. Structurally it is close to *raffrayi*, but is much darker, the under-surface of the abdomen with a more sharply defined excavation (without sub-basal armature), and antennae slightly shorter. The antennae are narrow at the base, then suddenly and strongly dilated and flat, near the apex they become narrower and deeper, with the apex itself almost circular, the greatest width is almost median; seen from below the basal two-thirds appear to be finely striated. The medio-basal impression of the pronotum is, for the genus, decidedly feeble, but is quite distinct. The excavation on the under-surface of the abdomen is actually of greater extent than the one on the upper-surface; the summit of the metasternal elevation is not spinose, but from some directions appears to be slightly angular.

CUCUJIDAE.

LAEMOPHILAEUS BLACKBURNI, Grouv. (1902).

L. frenchi, Blackb. (1903).

There was not time for the description of *blackburni* to be noted in the Zoological Record when the description of *frenchi* was sent for publication; otherwise the late Rev. T. Blackburn would certainly not have redescribed this remarkably distinct species.

SCARABAEIDAE.

NESO FLAVIPENNIS, Macl. (formerly *Platydesmus*).

N. yorkensis, Blackb.

N. planicollis, Blackb.

The late Rev. T. Blackburn has already⁽³⁾ referred to *planicollis* as a synonym of *flavipennis*; but he was under the

(3) *Ante*, 1907, p. 274.

impression that *yorkensis* was distinct on account of the club and the base of the prothorax. The antennae, however, are very different sexually; in the male the lamellae of the club are much longer than in the female, although in that sex they are so long that a unique specimen would probably be regarded as a male. On some specimens the convexity of the prothorax is more pronounced than on others, but the difference is certainly less striking than is implied in the table, and its *apparent* convexity is subject to alteration by the closeness of its application to the elytra. Of *yorkensis* there are in the Museum a cotype male and the type female; of *planicollis* there are two cotype females and a named male (but not marked as a cotype), and, sex for sex, these agree well in structure. There are also numerous other specimens before me, and the species may be taken in abundance at lights in Northern Queensland. The head and prothorax are frequently more or less reddish-castaneous, but vary (in both sexes) almost to black, occasionally they are scarcely darker than the elytra; pale females in colour are scarcely distinguishable from some forms of *Haplonycha testaceipennis*, but may be at once distinguished by the base of the prothorax being almost simple, instead of narrowly but conspicuously upcurved as on that species.

NESO DUCALIS, Blackb.

The carinae on the pygidium of this species is sometimes very conspicuous, but varies so that on some specimens it is not traceable. The male differs from the female in being more parallel-sided, and with the lamellae of the club almost twice as long. The size varies from 12 to 16 mm.

ANODONTONYX VIGILANS, Sharp.

A. creber, Blackb.

A. chalceus, Blackb.

A. indignus, Blackb.

Two specimens, one without label, the other⁽⁴⁾ labelled "Austral.," in Dr. Sharp's writing, were sent by Mr. Arrow as *A. vigilans*, a species commented upon by the late Rev. T. Blackburn as incapable of determination⁽⁵⁾ but as nearest in description to *chalceus*. They, in fact, agree well with three specimens from his collection labelled as *chalceus*, and their iridescence is quite as pronounced as on those specimens. They agree also with two named specimens of *indignus*, a cotype, and some other named specimens of *creber*.

(4) Almost certainly one of the specimens mentioned by Sharp.

(5) *Ante*, 1907, p. 260.

In Blackburn's table reliance was placed on the lateral parts of the prothorax being "very closely (almost confluent) punctulate" in *creber* and "much less closely" in *chalceus* and *indignus*. On the cotype of *creber* the punctures there are certainly somewhat denser than on specimens of the other supposed species, but they are also denser than on a specimen from Ballarat and two from Forest Reefs also identified by him as *creber*, and on these the punctures both there and elsewhere (including those between the first and second elytral striae) are much as on the specimens of *indignus* and *chalceus*; the two latter were distinguished by "Hind angles of prothorax quite distinct, though strongly obtuse" in *chalceus*, and "quite rounded off" in *indignus*; on the specimens in the Museum I can find no difference whatever in the actual rotundity of the angles when viewed from exactly the same direction; if viewed from different points and with the base closely applied to the elytra or not there appear to be slight differences. The apparent convexity of the prothorax of the various specimens differs also with the point of view, but from the same viewpoint the difference is extremely small, certainly not of more than individual importance.

ANODONTONYX PLANICEPS, Blackb. (formerly *Sericesthis*).

Sericesthis parvipes, Blackb.

There are in the Museum the type female, six other specimens labelled as *planiceps* by Blackburn, and numerous others. These vary in colour from light reddish-castaneous to forms whose prothorax, scutellum, and elytra are almost black; some have only the pronotum blackish, and some have the elytra dark but diluted with red about the shoulders. On some specimens, especially of the large dark ones, the clypeus is conspicuously bilobed in front, and it varies (independently of sex) to almost evenly rounded. The sizes of the elytral punctures are also somewhat variable.

Of *parvipes* there is one specimen labelled as a cotype, and I cannot distinguish this structurally from females of *planiceps*, the character relied upon by Blackburn, "Intermediate tarsi very little longer than their tibiae" as against "nearly twice as long" (of *planiceps*) is, on these specimens, more apparent than real; on some of them the claws are directed almost at a right angle to the claw joint, on others they appear to continue the line of the claw, and specimens of the latter (especially if males) appear to have much longer tarsi, but to the eye the four basal joints are just perceptibly longer than the tibia in both sexes.

Var. *ater*, n. var. Seven specimens (from Hawker) differ in having the entire upper-surface deep black, with the under-surface and appendages dark reddish-brown, becoming black in parts. The clypeus in all of them is rather conspicuously bilobed. They were sent with many other specimens having the head pale and the general colour not deep black.

ANTITROGUS BURMEISTERI, Blackb.

The table differentiating the three known species of *Antitrogus* given by Blackburn (*ante*, 1911, p. 199) readily permits of the specimens before me being divided into three aggregates, but he appears to have been in doubt as to whether the colours may not have been of more than individual importance. A long series of males (including a co-type and many specimens taken by Mr. Griffith, some of which were commented upon) indicate that the general colour varies from a rather dark reddish-brown to almost black. The size varies from 21 to 24 mm. The female is rather larger and stouter than the male, and the club is much smaller, but the proportions between the third and fourth joints of the antennae are the same; the spurs to the hind tibiae are somewhat stouter, but are otherwise scarcely different.

ANTITROGUS TASMANICUS, Burm.

This species varies in size from 19 to 23 mm., and in colour from a reddish-brown to piceous-brown, with or without a pruinose gloss; occasionally the elytra are paler than the rest of the upper-surface. The female differs from the male as does the female of *burmeisteri*, but the proportions of the third and fourth joints of the antennae are as in its own male.

SEMANOPTERUS.

By various authors nineteen⁽⁶⁾ names have been referred to this genus, and in dealing with these⁽⁷⁾ Mr. Gilbert J. Arrow transfers one (*dentatus*, Blackb.) to *Eophileurus*, and regards all the others, largely by "a study of the genitalia of the males" (these, however, not being otherwise noted) as belonging to but five species. I differ from him, however, as regards two (*meridianus* and *tricostatus*) of the names, and consider that but four species can be maintained.

There are in the South Australian Museum, from the Blackburn collection, specimens of all his supposed species,

(6) Really twenty, as Mr. Blackburn (*ante*, 1896, p. 250) refers to "my *S. punctiventris*," evidently an MS. name subsequently altered.

(7) Ann. and Mag. Nat. Hist., Ser. 8, vol. xiv., 1914, p. 267.

with the exception of *dentatus*; by the courtesy of the Curator of the Australian Museum (Mr. R. Etheridge) I have also been able to examine the types of Macleay's two species, and Mr. Arrow sent specimens which he identified as *solidus* and *subcostatus*.

SEMANOPTERUS CONVEXIUSCULUS, MacI.: Trans. Ent. Soc.
N.S. Wales, ii., p. 201.

S. angustatus, Blackb.: Trans. Roy. Soc. S. Austr.,
1887, p. 232; 1896, p. 252.

S. minor, Blackb.: l.c., 1887, p. 233; Proc. Linn. Soc.
N.S. Wales, 1888, p. 1413.

S. longicollis, Blackb.: Proc. Linn. Soc. N.S. Wales,
1888, p. 1412.

S. rectangulus, Blackb.: Trans. Roy. Soc. S. Austr.,
1895, p. 41.

S. persimilis, Blackb.: l.c., p. 42.

S. carinatus, Blackb.: l.c., p. 43.

S. meridianus, Blackb.: l.c., 1896, p. 250.

S. concentricus, Blackb.: l.c., p. 251.

S. tricostatus, Blackb.: l.c., p. 52.

S. distributus, Blackb.: l.c., p. 252.

Pl. xxx.; pl. xxxi., figs. 21, 22; pl. xxxii., figs. 30-35, 41.

To the synonymy of this species as given by Arrow the two last names have been added, making it as above. In Blackburn's table of the genus primary use was made of the basal angles of the prothorax, and in fact it is difficult at first to accept the idea that a specimen whose basal angle of prothorax is without the slightest incurvature, as on the type of *convexiusculus* (pl. xxxii., fig. 30) can be conspecific with another whose basal angle is very conspicuously notched, as on the cotype of *rectangulus* (pl. xxxii., fig. 32), especially when these differences are accompanied by others in the pygidium, prosternum, etc. However, from examination of the actual types Mr. Arrow came to his conclusion, and in this I am reluctantly compelled to follow him. I have very carefully studied Blackburn's table of the genus with the cotypes (marked as such by himself), and believe that in preparing it he could only have closely examined the types themselves, and made no allowance for variation. For instance, *concentricus*, *angustatus*, and *minor* are stated to have the sides of prothorax "strongly incurved in front of base"; those of two cotypes of *concentricus*, a cotype of *angustatus*, and two cotypes of *minor* have the sides just perceptibly incurved to base (pl. xxxii., fig. 31); on the type female of *concentricus* there is no incurvature at all, the sides being

as on the type of *convexiusculus* (pl. xxxii., fig. 30), but on a specimen he identified as *minor* (pl. xxxii., fig. 33), and which I regard as belonging to the variety *rectangulus*, there is a conspicuous notch near the base. A specimen labelled as *carinatus*, the type female of *persimilis*, two cotypes of *rectangulus*, and two of *distributus* could fairly be said to have the sides "strongly excised," as noted in the table, but a cotype of *tricostatus* (pl. xxxii., fig. 36) has but a slight incurvature there. The clothing of the pygidium is a practically useless character for a table, as the hairs are certain to become more or less abraded with age; the punctures of the pygidium are strikingly different on some of the cotypes, but here again, from them, I cannot follow Blackburn's comments. The discal depressions of the prothorax, as on most of the Dynastides, are particularly liable to variation.

Meridianus was regarded by Arrow as a synonym of *subcostatus*, but his opinion is not borne out by the type female, which placed side by side with the type of *convexiusculus* is seen to be absolutely conspecific with it, differing in a very slight degree in the basal angles and in the punctures; but in size, outline, and general sculpture the two are in perfect unison. Possibly the type male belongs to *subcostatus*, and the type female to *convexiusculus*, but this is doubtful from the description. A cotype female from Bindogundra has the prothoracic margins exactly as on the type of *convexiusculus*, but differs somewhat in the elytral punctures.

Tricostatus was apparently considered as distinct by Arrow, although all he says of it is that it is apparently confined to Western Australia.⁽⁸⁾ A cotype male in the Museum (pl. xxxii., figs. 32, 36) agrees absolutely (except for a slight degree in the notching of the base), with a specimen pl. xxx., fig. 8, and pl. xxxii., fig. 33) identified by Blackburn as *minor*). Two other cotype males (from Geraldton) have the prothoracic excavation exactly as on a cotype of *rectangulus*, and the basal notch as in fig. 35 (pl. xxxii.), with the third carina on each elytron less conspicuous than on the other cotype. It appears, therefore, that this name should also rank with the synonyms of *convexiusculus*.

A copy of these notes was submitted to Mr. Arrow for his opinion, which was given as follows:—"I strongly suspect that some of the specimens upon which you are relying as cotypes of Blackburn's species are not the same species as his types. *S. tricostatus* is a well-marked species, as you will see if you will examine the genitalia, which are of supreme

(8) Blackburn, however, said that from it "a single male example . . . from North Queensland seems indistinguishable . . ."

importance in distinguishing these insects. *S. meridianus* type is a female, but is certainly not *convexiusculus*, Macl., if the latter is *angustatus*, Blackb. I have mounted and carefully compared the aedeagi of all ten types and very many other specimens, and consider my conclusions certain."

I have not felt justified in breaking up the abdomen to examine the aedeagus of any of the male types or cotypes, but three figures are given from some specimens carefully compared with them.

Five males agreed closely with *rectangulus*, and the aedeagus of one is figured (pl. xxxii., fig. 41). The aedeagi of the others all differed slightly from it and from each other; on one of them the two serrations on each side were extremely feeble.

Four males agreed closely with a specimen considered by Mr. Blackburn to be *adelaidae*; of these one has the aedeagus as on pl. xxxii., fig. 39, two had it somewhat similar although not exactly the same, but that of the fourth (pl. xxxii., fig. 40) was without the subapical notch.

It would appear, therefore, that the aedeagus in some species is just as unreliable as external features.

SEMANOPTERUS SUBCOSTATUS, Cast. (*Phileurus*), Hist. Nat., ii., p. 116 (*Chiroplatys*, Mast. Cat., No. 2478).

S. adelaidae, Hope: Trans. Ent. Soc. Lond., iv., p. 281.

S. subaequalis, Hope: l.c., p. 282.

S. depressus, Hope: l.c., p. 282.

S. depressiusculus, Macl.: Trans. Ent. Soc. N.S. Wales, ii., p. 200.

Pl. xxxi., figs. 17-20; pl. xxxii., figs. 36, 39, 40.

Blackburn of *cubcostatus* remarked that it "might be almost any *Semanopterus*, but is probably *adelaidae*, Hope." Arrow says,⁽⁹⁾ "I have already⁽¹⁰⁾ expressed my opinion that the three names bestowed by Hope (*adelaidae*, *subaequalis*, and *depressus*) refer all to one species. To this species *depressiusculus*, Macl., and *meridianus*, Blackb., also apply, and it should be called *S. subcostatus*, Cast." In neither reference, however, does he give the grounds for his belief, and presumably the type of *subcostatus* is not in the British Museum. As regards *meridianus*, I consider that as a synonym it should be transferred to *convexiusculus*, and comment upon it under that species.

(9) *L.c.*, 1914, p. 267.

(10) *L.c.*, Ser. 8, vol. viii., 1911, p. 156; in this reference, however, he did not include *adelaidae*.

SEMANOPTERUS SOLIDUS, Burm. (*Scapanes*), Handb. v.,
p. 207.

S. subaequalis, (Hope) Blackb.: Trans. Roy. Soc.

S. Austr., 1887, p. 231.

Asemantus subaequalis, (? Hope), Blackb.: l.c.,
1896, p. 248.

Pl. xxxi., figs. 23-26; pl. xxxii., fig. 37.

Blackburn had doubts as to his identification of *subaequalis*, and these doubts were evidently well founded, as Arrow (no doubt from examination of the types) regards all three of Hope's names as belonging to but one species. The former, however, from his comments on *solidus*, evidently considered the probability of its being the same species as the one he identified as *subaequalis*. On pl. xxxi. are figures (23 and 24) of the specimens described by him as belonging to his new genus *Asemantus*, and the species he supposed to be *subaequalis*; whilst figs. 25 and 26 (pl. xxxi.) are of specimens identified by Arrow as *solidus*, they certainly belong to but one species, a fairly common one in parts of Queensland, New South Wales, Victoria, and South Australia.

Curiously enough standing under the name of *Scapanes solidus*, in many Australian collections, was one of the largest of our *Dynastides* (pl. xxxi., fig. 29),⁽¹¹⁾ but a reference to the original description proves that this legendary identification is utterly wrong.

SEMANOPTERUS LEAI, Blackb. (*Asemantus*), l.c., 1897, p. 29.

Pl. xxxi., figs. 27, 28; pl. xxxii., fig. 38.

Regarded by Blackburn as congeneric with the preceding species and generically distinct from *Semanopterus*; it occurs in Western Australia, and is very different from any other species of the genus.

EUPATORUS AUSTRALICUS, Arrow, Trans. Ent. Soc. Lond.,
1908, p. 354.

Pl. xxxi., fig. 29.

This species appears to be confined to the southern parts of coastal Queensland.

CORYNOPHYLLUS MODESTUS, Blackb.

A male from Queensland (Stanthorpe) differs from a co-type male of this species in having the cephalic horn larger

(11) *Eupatorus australicus*, Arrow.

and more acute, the space on the head behind it flat instead of concave, and the clypeus and tibiae reddish.

HORONOTUS OPTATUS, Sharp.

H. variolicollis, Fairm.

Palmerstonia minor, Blackb.

P. pusilla, Blackb.

Prior to their despatch to the British Museum I examined the types of *minor* and *pusilla*, and was satisfied that they are but forms of *optatus*, a species that varies greatly in size, and is frequently attracted to lights in the tropical parts of Queensland. Part of this synonymy has already been recorded.

HORONOTUS BOVILLI, Blackb. (formerly *Palmerstonia*).

A male from Cairns (E. Allen) differs from the male previously commented upon by Blackburn (*ante*, 1896, p. 254), in being considerably larger, in having the cephalic horn considerably larger, and the three prothoracic horns larger, more acute, and not placed in a transverse row (as on that specimen), but closer together, two in front and one behind; the difference to the eye is a very striking one, but the species of *Horonotus* are so variable that the difference is not likely to be more than an individual one. The stridulating file of the pygidium is a very beautiful one.

HEMIPHARIS FROGGATTI, MacL.

I have recently examined the types (sexes) of this species. As suspected⁽¹²⁾ they belong to the variety *speciosa* of *H. insularis*.

CHLOROBAPTA VIRIDISIGNATA, MacL.

A female in the Macleay Museum is evidently the type of this species, and as suspected⁽¹³⁾ it is a variety of *frontalis*. On its prothorax there are two small green spots on each side; associated with it is a male with quite ordinary markings.

DIAPHONIA DORSALIS, Don.

A male (from the Richmond River) in the Macleay Museum has the black markings much more extended than usual, the pale portion on each side of the prothorax being very narrow, the elytra are dark except for a very narrow lateral margin, and even this becomes infuscated about the apex; a second specimen (also from the Richmond River) has the pale elytral margins somewhat wider, and about the apex

(12) Trans. Roy. Soc. S. Austr., 1914, p. 149.

(13) *L.c.*, p. 156.

somewhat irregular, so that the dark portion at the summit of the apical slope appears to be trilobed.

DIAPHONIA MNISZECHII, Jans.

A specimen of this fine species is in the Macleay Museum from the Darling River.

LYRAPHORA OBLIQUATA, Westw.

A specimen labelled as from Mudgee (New South Wales) is in the Macleay Museum, but the locality is probably wrong.

GLYCYPHANA BRUNNIPES, Kirby.

There are two specimens of this species in the Macleay Museum, from North-western Australia, with the white markings occupying an unusually large proportion of the elytra.

MICROVALGUS QUINQUEDENTATUS, Lea.

Some specimens, that appear to be males of this species, differ from the females in having the apical segment of abdomen flattened in middle, and the general colours somewhat darker.

MICROVALGUS DUBIUS, Lea.

There are specimens of this species in the Macleay Museum from South Australia.

CURCULIONIDAE.

MYLLOCERUS HERBACEUS, Pasc.

Mr. Arrow sent for examination a cotype of this species; it has a strong conical tubercle projecting backwards from the under-surface of the rostrum, and all the femora are acutely and distinctly dentate; as these characters (the first of which is a very remarkable one) were not mentioned in the original description I thought that possibly a mistake had been made in the identification, and wrote to Mr. Arrow for confirmation of same. In reply he wrote, "I have examined Pascoe's type and find it has the peculiar hooked process on the rostrum and also sharply spined femora." *Mirabilis*, the only other Australian species with the under-surface of rostrum somewhat similar, belongs to a different section of the genus, and has the base of prothorax much wider and clothing very different.

ESSOLITHNA RATTULA, Pasc. (formerly *Pephricus*).

A cotype of this species, evidently the one noted as having "two fine white lines at the base of the elytra," was

sent for examination; specimens were in the Macleay Museum from the Darling River. The species in general appearance is fairly close to *cordipennis*, but the space between the scrobes is strongly narrowed posteriorly, whereas on that species it is slightly dilated posteriorly; the clothing also is different. As in some respects it seemed to agree with the description of *umbratus*, some years ago specimens were sent for comparison with the type of that species, and of these the late Rev. T. Blackburn wrote, "Specimens sent are certainly not *umbratus*. Apart from colouring (which is very different) it differs, *inter alia*, as follows: Shape of prothorax—in *umbratus*, less rounded laterally with greatest width in front of middle; in your species well rounded, widest at middle. Interval between scrobes in *umbratus* continuously and evenly narrowing from base to apex, in your species at its narrowest near base." The latter character will also distinguish the species from *mediofusca*, which in many respects it resembles. There is a whitish ring on each of the femora.

ESSOLITHNA NIGESCENS, Pasc. (formerly *Chaodius*).

A cotype of this species sent for examination has the front coxae exactly as on *Essolithna rattula*, that is to say, the intercoxal process is rather narrow, about half the width of that between the middle coxae and transversely cleft at its narrowest part; the claws are unidentate. It was only on these characters (in comparison with *Polyphrades*) that *Chaodius* was proposed as new, and I regard it is absolutely synonymous with *Essolithna*. The elytra were described as subparallel, but the shoulders are rather strongly rounded, the sides at the apical fourth are coarctate, and the sides between are gently rounded; possibly the sides are sexually variable, but the word subparallel as applied to the cotype would be misleading. The species is extremely close to *cordipennis*, but differs in having longer and narrower elytra.

ESSOLITHNA UMBRATA, Blackb. (*Pephricus*).

On closely examining a cotype of this species each claw is seen to have a smaller one soldered to it at the base; the smaller claw is invisible from most directions, but its presence on this species and its gradual enlargement on several species of *Polyphrades*, till at the apex the claws are noticeably cleft, but of equal size, seem to imply a doubt as to whether *Essolithna* (to which genus *Pephricus* has already been referred) can be eventually maintained as distinct.

CATASARCUS POLLINOSUS, Pasc.

C. maculatus, Pasc.

A specimen sent for examination by Mr. Arrow, marked as a cotype and bearing a label "*Catasarcus pollinosus*, Pasc.," in Pascoe's own writing, is simply a specimen of *maculatus* that has the whole of the upper-surface with a curiously leaden or varnished appearance. It was described as "having an ashy-waxy appearance above." This appearance is liable to occur on *any* species of *Catasarcus*, and I have previously commented upon it under the word "Varnishing."⁽¹⁴⁾ As, however, the description of *pollinosus* was printed (p. 23) before that of *maculatus* (p. 25) the latter name must be treated as a synonym. The species occurs in abundance at King George Sound and near same.

It is quite possible that the species is the *Cneorhinus impressipennis* of Boisduval.⁽¹⁵⁾ The figure of that species is certainly an extremely poor one, but, such as it is, it seems to come closer to this species than to any other before me.

CATASARCUS STIGMATIPENNIS, Boi. (formerly *Cneorhinus*).*C. transversalis*, Germ.*C. memnonius*, Pasc.

A specimen sent for examination by Mr. Arrow as a cotype of *memnonius* is simply an abraded⁽¹⁶⁾ one of *transversalis*, the only species of the genus of which I have seen authentic specimens from any other State than Western Australia. It is common in many parts of Victoria and South Australia, is considerably variable in size, and abraded specimens have a very different appearance from ones in good condition. I am also convinced that it is the *Cneorhinus stigmatipennis* of Boisduval, described as from Port Western (near Melbourne).

CATASARCUS OVINUS, Pasc.

A specimen from the British Museum bears three labels: — 1. "N. Australia." 2. "Bowring, 63.47." 3. "*Catasarcus ovinus*, Pasc. Compared with type, G. J. A." But in that institution (judging from specimens sent to me for examination) there are many specimens labelled as from North Australia and Bowring that are certainly not from the tropical portions of Australia, belonging to quite common

(14) Proc. Linn. Soc. N.S. Wales, 1897, pp. 593, 594.

(15) Voy. "Ast.," p. 350, and Atlas, pl. vii., fig. 9.

(16) It was described as being "without any scales."

species in New South Wales, Victoria, or Western Australia. This species is a common one in Western Australia, and is the one I previously⁽¹⁷⁾ surmised to be such.

CATASARCUS GRISEUS, Pasc.

A specimen sent as a cotype of *griseus* is certainly very close to the preceding one, but differs in the elytral striation being less evident posteriorly, and the punctures towards the base more or less transversely confluent (much as on many specimens of *transversalis*). In Pascoe's table they are separated by *griseus* being "oval and more or less oblong" and by *ovinus* being "shortly ovate"; there is certainly a slight difference in the comparative widths of the specimens sent, but there are specimens of *ovinus* before me with a still greater range in width. In *griseus* the first joint of the funicle was described as "very little longer than the second," in *ovinus* as "considerably longer"; but on each of the specimens sent the first joint appears to be about one-fourth longer than the second, the proportions being exactly the same. That the two forms represent distinct species I can hardly believe; if they should eventually prove to be varieties *griseus* has priority.

CATASARCUS CERATUS, Pasc.

C. granulatus, Lea.

A specimen sent for examination by Mr. Arrow, marked as a cotype, and bearing a label "*Catasarcus ceratus*, Pasc.," in Pascoe's own writing, is simply a varnished one of the species I subsequently named *granulatus*. Its finer sculpture is naturally less conspicuous and the varnishing has extended even to parts of the legs. Its antennae are missing, but those of the type were wrongly described.⁽¹⁸⁾

CATASARCUS LONGICORNIS, Pasc.

A Champion Bay specimen sent for examination as a cotype of *longicornis* agrees well (even as to the antennae) with a species, common about the Swan River, which I have long had as *hopei*. But probably Pascoe had another species as *hopei*, and I am not prepared to defend my identification of the latter. It might be pointed out, however, that the differences relied upon in his table by Pascoe could very well be sexual.

(17) Trans. Roy. Soc. S. Austr., 1909, p. 155.

(18) See note Trans. Roy. Soc. S. Austr., 1909, p. 156.

CATASARCUS ARMATUS, Blackb.

Six specimens before me, from Kalgoorlie, are evidently in better condition than the type was; four of them have the elytra at the base densely clothed (mostly in three conspicuous patches) with ochreous scales, having, on close examination, a somewhat golden glitter, and similar scales rather thickly scattered elsewhere. Along the middle of the prothorax there is usually a conspicuous line of bluish scales; three of the specimens have the shoulders tuberculate, but on the others they are unarmed.

CATASARCUS SERICEUS, Blackb.

A specimen, from Kuminin, possibly belongs to this species. Its scales, whilst mostly greenish, are considerably mixed with sooty and somewhat golden ones; the post-humeral tubercle (directly above the middle of the metasternum) is an obtuse swelling only, instead of a spine, as on most species of the genus.

AMISALLUS NODOSUS, Er.

A specimen, from Tasmania, agrees with Erichson's description of *nodosus*, but in addition to the large elytral tubercles described by him it has several small ones on the suture about summit of apical slope; these were not mentioned, but their presence on any species of the *Leptopsides* is of importance as an aid to identification, and *nodosus* is the only described species of *Amisallus* with such tubercles. A specimen from Mount Tambourine (Queensland) has similar sutural tubercles to the Tasmanian one, but the interior row on the right elytron is composed of five, and on the left elytron of seven, large tubercles.

AMISALLUS WHITEI, Waterh., var.

A specimen, from Cairns, differs from the typical form of this species in having a cluster of four conjoined tubercles, forming an irregular mass on each shoulder; the furrow on its prothorax is distinct, narrow, and scarcely interrupted, and the inter-ocular tubercles smaller and more obtuse than usual.

LIPOTHYREA CHLORIS, Pasc., var.

Five specimens from Charters Towers differ from the typical form of this species in having the green scales replaced by ashen ones, and the size decreasing to 6 mm.; the general appearance of the smaller specimens is much like that of *arrowi*, but they are without the conspicuous long setae of that species.

OXYOPS GEMELLA, Pasc.

A specimen from "Western Australia" (the type was from Champion Bay) sent as a cotype of *gemella* is very close to *multidentata*, but differs in the front tibiae being thicker, straighter, and less conspicuously dentate. The original description is distinctly misleading (if the cotype agrees well with the type), as the elytra were noted as having the third interstice elevated throughout and as having "singulatim medio nigro-plagiatis et postice macula alba distincta notatis"; also no mention was made of a rather strong prothoracic carina. On the cotype there is a semicircular irregularly double row of large punctures or foveae, commencing near the shoulder, curved round to near suture, and then obliquely hindwards, terminating about summit of apical slope; these punctures appear darker than the adjacent parts owing to partial absence of clothing, but the space there is certainly not black. The species also occurs in South Australia and Victoria.

ETHEMAIA ALTERNATA, Lea.

Mr. Feuerheerdt has recently taken numerous specimens of this species. On some of them the elytral scales are mostly slaty-white, but with patches varying to sooty; on many of them there are small patches of ochreous scales at the base of the head; some of them have a second tubercle on the fifth interstice before the one crowning the apical slope.

LYCOSURA BREWERI, Pasc. (formerly PANTOREITES).

L. inermis, Lea.

A cotype of *breweri* sent for examination by Mr. Arrow does not even belong to the Gonipterides, but is a *Lycosura*, and is the species I have named *inermis*.

OPSITTIS ATOMARIA, Pasc.

Sediantha maritima, Lea.

Mr. Arrow sent for examination a cotype of *Opsittis atomaria*. The genus and species are the same as those I subsequently named *Sediantha maritima*. The eyes were correctly described by Pascoe as transverse, small and approximate in front, but the figure (pl. vii., fig. 8) of the side view of the head is utterly misleading. The genus is quite close to *Desiantha* of the Erirhinides, but Pascoe referred it to the *Molytides*, where I would never have thought of looking for it.

PHRENOZEMIA.

This genus was referred by Pascoe to the group Eugnomides of the Eirirhinides. A female of the typical species, *lyproides*, was recently sent to me for examination by Mr. Arrow; it bears a name label by Pascoe, and is no doubt a cotype; there are also numerous specimens from Geraldton before me that belong to the species. The genus looks out of place in the Eirirhinides, and more as if it should be associated with *Medicasta*, or possibly *Acalonoma*, but regarding it as an Eirirhinid it could, in Blackburn's table⁽¹⁹⁾ (disregarding the position assigned to it by him on account of the "eyes as much on rostrum as on head," a scarcely correct character,⁽²⁰⁾ as the eyes, although quite frontal, are not any more "on" the rostrum than on many other Eirirhinid genera), be associated with *Desiantha*, to which it is far from being closely allied; but if excluded from I of that table, it could be placed in MM,⁽²¹⁾ and the ocular lobes being entirely wanting, it would be associated with *Omorophius*, to which also it is far from being closely allied. The eyes are rather large but not prominent, coarsely faceted, and distant from the prothorax; the head is regularly narrowed from its base to the base of the rostrum, and the eyes are so little prominent that they scarcely interfere with the general obliquity of the sides.

PHRENOZEMIA LYPROIDES, Pasc.

This species is individually and sexually variable. In the specific description the scales were noted as "*griseo-albis*," but in the generic one as having "a pearly lustre"; on the pronotum there is often a pale median line of scales extending forwards on to the base of the head, and backwards to beyond the scutellum; towards each side of the elytra there is often a whitish vitta, with a golden or greenish gloss, but often the scales of the upper-surface are smoky-brown, pale golden-green and golden confusedly mixed; on the under-surface and legs they are also variable, but with the paler colours prevailing; some specimens, however, have scarcely any gloss to the scales, and the expression "*griseo-albis*" well applies to them. The rostrum of the male is almost straight and almost as long as the prothorax, and the antennae, when stretched out at right angles to the rostrum, are so placed

(19) *Ante*, 1894, pp. 148-150; although tabulated by Blackburn it was apparently unknown to him.

(20) Nor can I find any warrant in Pascoe's description or in his table of genera for such a character being used.

(21) Pascoe corrected the original description of the funicle when describing a second species of the genus.

that the distance separating them is slightly greater than the distance between them and the tip of the muzzle. In the female the rostrum is thinner, more noticeably but not strongly curved, about one-fourth longer, and the distance between the antennae is scarcely more than half that between them and the tip of the muzzle. The basal segment of the abdomen of the male is moderately concave, and the second is flat in the middle; in the female the basal segment is gently convex in the middle, and the second decidedly convex.

CYROTYPHUS FASCICULARIS, Pasc.

A specimen from Coolgardie differs from the normal form of this species in being considerably larger (17×7 mm.), fascicles on the elytra more numerous (there are nine small ones on each side of the suture), the transverse series of four tubercles on the pronotum larger, and the apex with two fairly large ones (on the normal form these are represented by slight ridges).

CTENAPHIDES MACULATUS, Pasc. (formerly *Eurhynchus*).

C. gymnostictus, Lea.

Mr. Arrow sent a female of *Eurhynchus maculatus* for examination, marked as having been compared with the type. It is the species I subsequently named *C. gymnostictus*. Pascoe's description is somewhat misleading, as the club was given as black and the elytral interstices as having piceous spots; the elytra certainly have a spotted appearance, but this is due to small glabrous spaces, these being exactly the same colour as the rest of the derm. The scutellum was described as triangular; as a matter of fact, it is almost vertical with a conspicuous median groove.

HAPLONYX SCOLOPAX, Pasc.

A cotype of this species sent for examination proves to be, as previously suspected,⁽²²⁾ simply an abraded specimen of *spencei*; the sexes differ in the length of the rostrum, that of the female being distinctly longer than that of the male.

HAPLONYX DOTATUS, Pasc.

A cotype of this species is certainly but one of the many varieties of *myrrhatus*. The clothing and scales of specimens of *Haplonyx* that have been preserved in liquids often differ considerably in appearance from specimens of the same species that have been killed and kept dry. Partial abrasion also considerably alters their appearance.

(22) *Ante*, 1910, p. 44.

HAPLONYX FALLACIOSUS, Pasc.

A cotype of this species is structurally very close to *fasciculatus*, but has the prothorax non-fasciculate. The description implies that there is but one fascicle on each elytron, but on the cotype there are five on each, three on the third interstice and two on the fifth.

DECILAUS INFAUSTUS, Pasc. (formerly *Drassicus*).*Decilaus coryssopus*, Lea.

A specimen sent for examination by Mr. Arrow as a cotype of *Drassicus infaustus* and agreeing with the description, agrees with the type of *D. coryssopus*. Pascoe referred it with some doubt to *Drassicus*, but it belongs to *Decilaus*; he recorded it from Wide Bay, and the cotype is so labelled; the types of *coryssopus* were from Hobart, and it is very doubtful if Wide Bay was correctly given.

PHLAEOLYMMMA PALLIDA, Lea.

Two specimens, from the old collection, and without locality labels, evidently belong to this species. They differ from the type in having most of the scales on the upper-surface of a dingy light brown, but in places verging to sooty. The white scales form three lines on the pronotum, of which the median line is no longer than the others. On each elytron they form an oblique stripe from the shoulder to near the suture, and another across summit of posterior declivity. On the under-surface the light-brown scales are fairly numerous. The three specimens, that I have now seen of the species, appear to be all males.

PACHYPOROPTERUS SATYRUS, Pasc. (*Poropterus*).*Poropterus inominatus*, Pasc.

Mr. Arrow informed me that these names are synonymous, *satyrus* was recorded from Tasmania and *inominatus* from Queensland; the former occurs in many parts of Tasmania, but apparently not beyond that State. If the type of the latter was really from Queensland, I should be dubious about its being really a synonym, especially as Pascoe compared them, saying of *inominatus* that it was "shorter, less convex, the parts behind the carina marking the upper region of the epipleura, abruptly constricted, and the scales at the base of the elytra concolorous with and closely fixed to the derm, the part, except under a strong lens, appearing denuded." However, in a second communication Mr. Arrow wrote, "The single type specimen of *inominatus* bears only the loc. Queensland in Pascoe's

handwriting. The only part of the above comparative description which I can confirm is the denuded appearance, which is an unmistakeable reality. I think Pascoe must have made a mistake in the locality and imagined the rest."

OMYDAUS LURIDUS, Fab. (formerly *Rhynchaenus*).

Cryptorhynchus fuliginosus, Boi.

Acalles immansuetus, Boh.

O. plinthoides, Pasc.

In commenting⁽²³⁾ on the synonymy of *fuliginosus*, I was somewhat dubious as to *luridus* really being the same species, as Pascoe stated that it was a *Poropterus*; I have seen the type of *fuliginosus*, which is certainly the same as *immansuetus* and *plinthoides*, and Mr. Arrow has recently compared the types of *luridus* and *plinthoides*, and considers them identical.

CHRYSOMELIDAE.

DIAPHANOPS WESTERMANNI, Boh.

Var. *D. meyricki*, Blackb.

Var. *D. parallelus*, Blackb.

There are before me 28 specimens, all of which I believe to be *westermanni*, but they present considerable differences in size, colour, and clothing. The difference in appearance of the clothing is often due to partial abrasion⁽²⁴⁾ and to the colour of the derm upon which it is resting, but on some specimens it is beautifully regular, and on others it appears to be rougher, this, however, probably being due to some of them having been preserved in alcohol. The colour of the derm varies from entirely pale reddish-brown to entirely deep black, many specimens have the elytra and appendages conspicuously paler than the head and prothorax, some have the elytra only paler, and some have only parts of the head and of the antennae darker than the other parts. On the male the prothorax is rather shorter than on the female, and with the front angles more conspicuously rounded off, its elytra also are proportionately wider than on the female, and the antennae are slightly longer. The specimens commented upon or described by Blackburn⁽²⁵⁾ were all taken by Mr. Meyrick at Geraldton, and of these there are in the Museum two doubtfully identified as *westermanni*, two marked as

(23) Proc. Linn. Soc. N.S. Wales, 1913, p. 463.

(24) On partially abraded specimens there are seen to be seriate rows of large punctures on the elytra, but these are normally almost or quite concealed.

(25) Proc. Linn. Soc. N.S. Wales, 1889, pp. 457-9.

cotypes of *meyricki*, and one as a cotype of *parallelus*.⁽²⁶⁾ Of a pair taken *in cop.* at Geraldton the male agrees perfectly with the specimens identified as *westermanni*, the female agrees perfectly (except that the head and part of the antennae are much darker) with the cotypes of *meyricki*. Of another pair taken *in cop.* at Bunbury, the male agrees perfectly with the cotype of *parallelus*; the latter certainly has not anything near as parallel elytra as is implied by the description, these being (except for the sexual difference in width) practically the same as in the cotypes of *meyricki*.

CRIOCERIS FUSCOMACULATA, Clark.

C. recens, Blackb., var.

This species is very variable and is abundant in Northern Queensland. The following more or less constant colour forms may be noted:—

A. Flavous; head (neck usually excepted), scutellum, parts of under-surface and of appendages (most of femora excepted) black. In general appearance this form is close to *C. nigripes*, but differs considerably in the punctures and in the shape of the prothorax; that species appears also to have the scutellum invariably pale, on this (and in all other forms of the species) it is invariably dark. On this and on form B the elytral punctures are often surrounded by watery rings, when they appear to be considerably larger than they really are; on examining them from the sides, however, they are seen to be no larger than on the darker specimens.

B. Like A, except that on each elytron before the middle there is a conspicuous more or less rounded black spot. This is the typical form.

C. Black, elytra flavous, a large black spot on each elytron.

D. Like A, except that there is a large black blotch on the elytra occupying more than half of the surface, but leaving the basal third, margins, and apex pale.

E. Like D, except that the suture is pale throughout.

F. Black, basal fourth of elytra (and sometimes the extreme margins or portions of them) pale. This is the variety *recens*.

There are other forms varying in the under-surface and legs; one before me is entirely black, except that a narrow basal edging to each elytron and parts of the under-surface and of the femora are reddish. The pale colour on the various forms varies from a clear flavous to a rather dark red, but this may be due to age, etc.

(26) Although he stated that "a single specimen was taken."

STETHOPACHYS FORMOSA, Baly.

This species occurs from the Richmond River, through the coastal districts of Queensland to Darwin. In the most abundant form the elytra have five spots, three somewhat angular sub-basal ones, and two rounded or transverse subapical ones; occasionally the three sub-basal ones are conjoined, and frequently the subapical ones are; on an occasional specimen the spots are entirely absent, and occasionally they are reduced to two small subapical ones and a minute one near each shoulder; on one specimen each subhumeral spot is split up into two, so that there is a transverse series of five spots near the base. There are also other varieties, but I have seen none bearing the cephalic spot of the type.

STETHOMELA PURPUREIPENNIS, Lea.

A specimen of this species has recently been taken at Hobart by Mr. G. H. Hardy.

CALOMELA TENUICORNIS, Lea.

Mr. Carter informs me that the locality "Sandgate" for the specimen received from him should have been "Sandstone" (half-way between Murchison and Kalgoorlie).

ARSIPODA KINGENSIS, Blackb.

The late Rev. T. Blackburn described *kingensis* as a variety of *variegata*, but I am convinced that it should be regarded as a distinct species. In addition to the King Island specimens numerous others have been taken in various parts of Tasmania, and there were two in the Blackburn collection from Adelaide, and all these differ from *variegata* in being distinctly narrower, prothoracic and elytra punctures considerably larger, colour invariably very pale, and the elytra never with darker markings. *Variegata* is certainly a variable species, but I have never seen a specimen without some darker markings, and even the palest specimens differ from *kingensis* in the structural features noted.

CHIRIDA MULTICOLOR, Blackb.

The type of this species was described as having on its prothorax "a short broad blackish vitta running forward a short distance from the base and dilating at its front." But on a cotype the vitta, although of the shape described, is of a rather light brown. There are numerous other specimens before me (from Cairns, Mulgrave River, Mackay, and Clarence River) that structurally agree so well with the cotype that I cannot regard them as distinct, but they all have the prothorax immaculate.

EXPLANATION OF PLATES.

PLATE XXX.

(All of *Semanopterus convexiusculus*, Macl.)

- Fig. 1. Type, Gayndah.
 „ 2. *S. angustatus*, Blackb. Cotype, South Australia.
 „ 3. *S. minor*, Blackb. Cotype, South Australia.
 „ 4. *S. minor*, Blackb. Type of female, South Australia.
 „ 5. *S. longicollis*, Blackb. Type of female, Coonabarabran.
 „ 6. *S. rectangulus*, Blackb. Type of female, Alice Springs.
 „ 7. *S. rectangulus*, Blackb. Cotype, Leigh Creek.
 „ 8. *S. rectangulus*, Blackb. (identified as *minor*, Blackb.). Elder Expedition.
 „ 9. *S. rectangulus*, Blackb. N. Queensland.
 „ 10. *S. persimilis*, Blackb. Type of female, N. Queensland.
 „ 11. *S. carinatus*, Blackb. Bears name-label but is not a cotype, Queensland.
 „ 12. *S. concentricus*, Blackb. Type of female, Darling Downs.
 „ 13. *S. concentricus*, Blackb. Cotype, Beverley.
 „ 14. *S. concentricus*, Blackb. Without name label, but numbered 6207, Nullabor Plains.
 „ 15. *S. distributus*, Blackb. Type of female, Whitton.
 „ 16. *S. distributus*, Blackb. Cotype, Tamworth.

PLATE XXXI.

- Fig. 17. *S. subcostatus*, Cast. (identified by Mr. Arrow). New South Wales.
 „ 18. *S. subcostatus*, Cast. (identified by Mr. Blackburn as *adelaidae*, Hope). South Australia.
 „ 19. } *S. subcostatus*, Cast. (*depressiusculus*, Macl., types).
 „ 20. } Gayndah.
 „ 21. *S. convexiusculus*, Macl. (*meridianus*, Blackb., type of female). New South Wales.
 „ 22. *S. convexiusculus*, Macl. (*tricostatus*, Blackb., cotype). Western Australia.
 „ 23. } *S. solidus*, Burm. (identified by Mr. Blackburn as sub-
 „ 24. } *aequalis*, Hope). South Australia.
 „ 25. } *S. solidus*, Burm. (identified by Mr. Arrow). Queens-
 „ 26. } land.
 „ 27. *S. leai*, Blackb. Cotype, Pinjarrah.
 „ 28. *S. leai*, Blackb. Type of female, Western Australia.
 „ 29. *Eupatorus australicus*, Arrow.

PLATE XXXII.

- Fig. 30. Sides of prothorax of figs. 1 and 12.
 „ 31. „ „ „ 2, 3, 4, 5, 13, 14, and 21.
 „ 32. „ „ „ 6.
 „ 33. „ „ „ 7, 8, and 15.
 „ 34. „ „ „ 9 and 10.
 „ 35. „ „ „ 11 and 16.
 „ 36. „ „ „ 17, 18, 19, 20, and 22.
 „ 37. „ „ „ 23, 24, 25, and 26.
 „ 38. „ „ „ 27 and 28.
 „ 39. Aedeagus of *S. adalaidae*, Hope.
 „ 40. „ „ „ „
 „ 41. „ „ *S. rectangulus*, Blackb.